

## **Sweatband using mono filament yarn for a Cap**

### **BACKGROUND OF THE INVENTION**

#### **1. Field of the Invention**

The present invention is related to a field of headwear and, more particularly, to the sweatband which has a special feature of keeping the shape of crown in addition to the appropriate elasticity.

#### **2. Description of the Prior Art**

A typical baseball-style cap generally includes a crown which is the main portion and has one or more sheets of panels, a visor portion which is secured to the forward edge of the crown portion, a sweatband which is attached to the lower part of the inside of the crown, and a size controller which is attached to the underside of the rear of the crown.

Alternatively, cap sweatbands have been constructed that include an elastic band made of fabric which includes spandex yarn, giving the sweatband size flexibility while eliminating the size controller.

It has been found, however, that caps relying on spandex sweatbands for sizing exert pressure against the ~~wearer=s~~ wearer's head which can become uncomfortable after the cap is worn for an extended period of time. In addition, when being taken off, the rear side of crown of cap may be drooped down, the shape of the cap is not be kept.

Accordingly, a need exists for an improved sweatband that gives comfortable feeling even when worn for a long time in addition to have having elasticity as well as keep keeping the shape of the rear side of crown of cap when taken off.

#### **SUMMARY OF THE INVENTION**

In view of the foregoing, one object of the present invention is to provide headwear with a sweatband that does not exert undue pressure on the head when worn.

Another object of the present invention is to provide a sweatband which keeps the shape of the rear side of crown of cap.

A further object of the present invention is to

provide a sweatband, having excellent sweat-absorbing capability.

In accordance with these and other objects, the present invention is directed to a sweatband mainly used for headwear and woven by properly arranging mono filament yarn warp-way and nylon multifilament yarn weft-way or by properly mixed polyester multifilament yarn each way without the stitching portion with no need for stitching. The sweatband does not contain polyurethane and is evenly elastic because it has the effect to be stretched by the structure of the textile and said multifilament yarn weft-way ~~has the shape of a coil like a spring, and has~~ the feature of being twisted at regular intervals.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

Figure 1 is a right view of a free size cap of pre-existing art which the rear side of crown is drooped down;

Figure 2 is a sectional view of the partial side

of a cap to which a sweatband made of the monofilament yarn of the present invention is attached;

Figure 3 is a textile structural view of the sweatband of the present invention by another embodiment.

#### **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

In describing preferred embodiments of the invention illustrated in the drawings, it is to be understood that these embodiments are given by way of illustration only. It is not intended that the invention be limited in its scope to the details of construction and arrangement of components set forth in the following description or illustrated in the drawings. Also, in describing the preferred embodiments, specific terminology will be resorted to for the sake of clarity. It is to be understood that each specific term includes all technical equivalents which operate in a similar manner to accomplish a similar purpose.

The present invention is directed to a sweatband suitable for use with headwear of various types, but is

described herein in connection with a baseball-style cap as shown in Figure 2. It is understood that the inventive sweatband may also be used with other types of headwear or even alone.

Figure 1 is a right view of a free size cap of pre-existing art which the rear side of crown is drooped down. As shown in Figure 1, the free size cap of pre-existing art is composed of a crown portion 1 which is made of a plurality of panels, a visor portion 2 that is secured to the forward edge of the crown, the elastic sweatband which that is secured to the lower peripheral edge of the interior of the crown, and does not have size controller. And the cap naturally fits to wearer's head having no need to control the size when worn as the elastic sweatband having spandex is extended. But, as pointed above, the free size cap of pre-existing art may cause the problem of giving severe pressure feeling in head when worn for an extended time and, when being taken off, the rear side of the crown 3 of cap tends to be drooped down, the original shape of the cap is not kept causing a bad view.

Figure 2 is a sectional view of the partial side

of a cap to which a sweatband made of monofilament yarn of the present invention is attached. As shown in Figure 2, like free size caps of pre-existing art, it is externally composed of a crown portion 4 which includes a plurality of panels, a visor portion 5 which is secured to the forward edge of the crown, a sweatband 6 which is secured to the lower peripheral edge of the interior of the crown, and has no size controller. The sweatband 6 is woven the monofilament yarn warp-way and two-ply multifilament yarn weft-way to have a flat cylinder shape without the stitched portion, and it may be made of the monofilament yarn warp-way and a single ply multifilament yarn weft-way. The sweatband does not contain polyurethane and is evenly elastic because it has the effect to be stretched by the structure of the textile. And the material of the sweatband 6 can be nylon or polyester, and has a width that is preferably within the range of 25mm to 70mm. The monofilament yarn warp-way plays a role to keep the shape of the rear side of the crown of a cap without being drooped down.

When being taken off, the shape of the rear side 7

of the crown is maintained without being drooped down, and the sweatband also provides excellent sweat absorbing capability and does not give undue pressure such that the cap remains to give comfortable feeling when worn for a long time. In addition, for using said sweatband of a headwear, it can be applied both to the headwear necessary to have the elasticity of sweatband without additional size controller and to the headwear necessary to have the elasticity of sweatband with additional size controller.

The yarn used for the sweatband is processed by a high temperature treating and piece dyeing method, and the multifilament yarn weft-way has the shape of a coil like a spring, and has the feature of being twisted at regular intervals.

Figure 3 is a textile structural view of the sweatband of the present invention by another embodiment. As mentioned above, the textile structure of the sweatband according to the present invention is formed by mixing the monofilament yarn warp-way and the multifilament yarn weft-way, of which material can be nylon or polyester. The monofilament yarn warp-way plays a role to keep the shape

of the rear side of the crown of a cap without being drooped down. In addition, as shown in Figure 3, According to the condition like this embodiment, for the sweatband, the monofilament yarn 8 and the multifilament yarn 9 may be arranged together warp-way and the multifilament yarn 10 may also be woven weft-way.

The foregoing descriptions and drawings should be considered as illustrative only of the principles of the invention. The invention may be configured in a variety of shapes and sizes and is not limited by the dimensions of the preferred embodiment. Numerous applications of the present invention will readily occur to those skilled in the art. For example, the headband may be incorporated into hats, caps and visors of other styles, or may be used alone. Therefore, it is not desired to limit the invention to the specific examples disclosed or the exact construction and operation shown and described. Rather, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

**What is claimed is:**

1. (Currently amended) A sweatband using monofilament yarn for a cap,

said sweatband woven with the monofilament yarn warp-way and two-ply multifilament yarn weft-way to have a flat cylinder shape ~~without the stitching portion with no need for stitching~~ and, the yarn from said sweatband contains no polyurethane and is processed by a high temperature treating and piece dyeing method and, said multifilament yarn weft-way ~~has the shape of a coil like a spring, and has the feature of being twisted at regular intervals.~~

2. (Previously Presented) As set forth in claim 1, wherein the sweatband woven with the monofilament yarn warp-way and a single ply multifilament yarn weft-way.

3. (canceled)

4. (Previously Presented) As set forth in claim 1, wherein the yarn comprising the sweatband is nylon.

5. (Previously Presented) As set forth in claim 1, wherein the yarn comprising the sweatband is polyester.

6. (Currently amended) As set forth in claim 1, wherein said the sweatband is woven with the monofilament

yarn and the multifilament yarn arranged together warp-way and two-ply multifilament yarn weft-way.

7. (Currently amended) Headwear comprising:

a crown ;

a visor portion secured to a peripheral edge of said crown and extending outwardly there from; and a sweatband attached along the lower peripheral edge of said crown, and said sweatband is woven with the monofilament yarn warp-way and two-ply multifilament yarn weft-way to have a flat cylinder shape ~~without the stitching portion with no need for stitching~~ and, the yarn from said sweatband contains no polyurethane and is processed by a high temperature treating and piece dyeing method and, said multifilament yarn weft-way has the shape of a coil like a spring, and has the feature of being twisted at regular intervals.

8. (Previously Presented) As set forth in claim 7, wherein the sweatband woven with the monofilament yarn warp-way and a single ply multifilament yarn weft-way.

9. (Canceled)

10. (Previously Presented) As set forth in claim 7, wherein the yarn comprising the sweatband is nylon.

11. (Previously Presented) As set forth in claim 7,

wherein the yarn comprising the sweatband is polyester.

12. (Currently amended) As set forth in claim 7,  
wherein said the sweatband is woven with the monofilament  
yarn and the multifilament yarn arranged together warp-way  
and two-ply multifilament yarn weft-way.